

ABSTRACT OF THE DISCLOSURE

An apparatus and method for operating a continuously variable transmission (CVT), such as a toroidal drive type transmission, is disclosed. The CVT is selectively operated in either a torque control strategy and a ratio control strategy, 5 depending upon the operating conditions of the vehicle. Thus, the CVT is operated in such a manner as to benefit from the advantageous aspects of both the torque and ratio control strategies, while avoiding the disadvantageous aspects of both strategies. The transition from the torque control strategy to the ratio control strategy (and vice versa) can be accomplished by simultaneously calculating the control pressures that would 10 result from operation in both the torque and ratio control strategies, and further assigning a weighted value to each of such calculated control pressures based upon the current operating conditions. The summation of such weighted values provides a composite control signal that facilitates a smooth transition between the two control strategies. The transition from the torque control strategy to the ratio control strategy 15 preferably occurs before a mode shift is effected. Negative feedback is provided in response to ratio changes effected by the control signals to increase stability and to compensate for sensitivity differences at different ratio angles, loading, speeds, and temperatures.